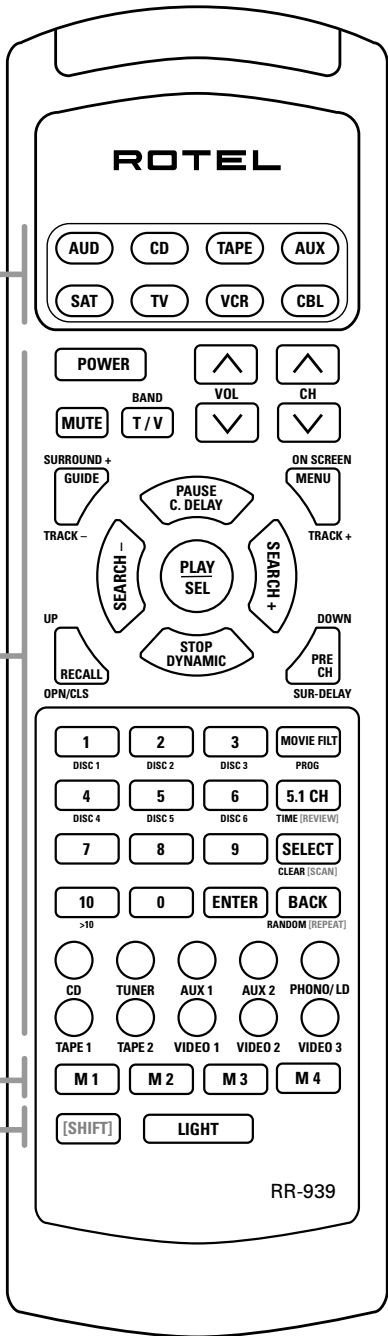


RR-939 Remote Control Owner's Manual



Introduction

Thank you for purchasing the RR-939 Universal Remote Control. It is designed to operate all current Rotel products as well as a wide range of popular audio and video components from other manufacturers. You will find that the RR-939 Remote Control is a significant improvement over conventional remotes in overall convenience and ease of operation.

Please take a few moments to read this user guide. You'll find the time well spent as it will significantly shorten your search for remote control sanity.

Some Preliminary Precautions

- The RR-939 is surprisingly rugged but it is not indestructible. So please don't drop it — particularly not on a concrete floor! With normal care, the RR-939's low maintenance design will let you enjoy its convenience for years to come.
- When the RR-939 needs a bit of cleaning, use a soft, lint-free damp cloth.
- Above all, don't try to take the RR-939 apart. There isn't anything inside you can fix anyway and disassembly will void the warranty.

Battery Installation

Remove the RR-939 and the package of 4 AAA batteries from the packing material. Turn the RR-939 over and lift the cover off the battery compartment by compressing the release tab and lifting up.

Place the four AAA batteries inside (follow the polarity drawing on the bottom of the compartment) and replace the cover. MAKE SURE you install the batteries correctly!

Using the RR-939

The RR-939 can replace up to eight different remote controls. Stored in memory are control codes to operate your specific audio/video components, selected from hundreds of models in the RR-939's extensive database. Programming the RR-939 to operate your components takes just minutes and need only be done once. See the PROGRAMMING section of this manual for easy to follow instructions.

Once the programming is complete, you select a component with the press of a button and turn the RR-939 into the remote control for your Rotel CD player or your Sony TV set or your Panasonic video recorder. Then, you simply press command buttons that duplicate the functions on the remote that came with your component.

To get started, look at the layout of the RR-939 and the following operating instructions:

Device Buttons 1

Eight buttons at the top of the RR-939 determine which set of commands is currently active. For example, if you press the AUDIO button (labeled AUD), the RR-939 becomes the remote control for your Rotel Surround Sound Processor. If you press the TV button, the RR-939 becomes the remote control for your TV set.

These buttons are also used in programming the RR-939. See the PROGRAMMING section below for details.

Command Buttons 2

This large group of buttons duplicates the functions on the remote controls for your audio/video components. A general description of these functions follows. Detailed information on the specific function of each button can be found in the CONTROL COMMANDS tables at the back of this manual.

At the top of this group of buttons are basic controls such as Power, Volume, Channel Selection, etc.

Below these is a group of buttons that duplicate the transport functions on a tape recorder or VCR (Stop, Play, Pause, etc.) as well as the Up and Down commands that might be found on a cable or satellite TV receiver.

The next group of buttons duplicates the numeric keypad buttons such as might be used for direct track selection on a CD Player or direct channel selection on a TV set. Included in this section are special command buttons providing functions found on various components.

At the bottom of this group of buttons are ten round source selection buttons labelled CD, TUNER, TAPE, etc. These duplicate the source input selection buttons on a receiver, preamplifier, or surround sound processor. The function of these buttons is not the same as the DEVICE buttons at the top of the remote control. The DEVICE buttons determine which command set is active on the RR-939. The source select COMMAND buttons switch inputs on the audio/video component being controlled.

To operate the RR-939:

Step One: Press a DEVICE button to activate the commands for the desired component. This command set will remain active until you press a different DEVICE button.

Step Two: Press COMMAND buttons to operate the component you have selected.

Remember that the COMMAND buttons duplicate many controls on many different types of audio/video components and their function may vary depending on the type of component selected. For example, the PLAY/SELECT button engages the play mode on a CD Player, but it duplicates the SELECT function on a cable TV converter.

Note: The RR-939 tells you which command set is active. Each time you press a COMMAND button, the active DEVICE key blinks red to tell you which component you are controlling. If the COMMAND button that you press has no function in the active command set (for example, the numeric keys in VCR mode), no DEVICE button will blink, indicating that the COMMAND button is inactive.

The COMMAND buttons are labelled, often with multiple labels if the button serves different purposes for different kinds of components. As long as you remember that pressing a DEVICE button turns the RR-939 into, for example, a CD player remote control or a VCR remote control, the functions of each button should be intuitive. Tables listing the function of each button for each type of component can be found in the back of this manual.

A few buttons have a second function, activated by pressing and releasing the SHIFT button before pressing the COMMAND button, as described below.

Macro Buttons 3

A macro is a series of individual commands triggered by pressing one button. Macros make operating a complex home entertainment system much easier. For example, think of playing a videotape: You turn on the TV, turn on the VCR, select the TV input connected to the VCR, and, finally, put the VCR into Play mode. That's four separate commands — and it may take you as many as six pushes on various buttons to execute them. A macro makes this simpler by executing all the needed commands with just one push of a button.

There are five MACRO buttons on the RR-939 — the four buttons labeled M1, M2, M3, and M4, along with the POWER button. A sequence of up to eight different com-

mands can be memorized to be replayed automatically with the press of a MACRO button. See the section, PROGRAMMING MACROS, for more detailed information.

Note: Macro buttons are available only in the AUD, SAT, and CBL modes. However, you can include switching to a different DEVICE mode as part of a macro, in order to operate other components.

To replay a MACRO, first activate one of the DEVICE modes (AUD, SAT, and CBL only). Then, press the desired MACRO button. If a macro has been programmed for that button, the RR-939 will replay the memorized sequence of commands and the DEVICE button will blink red for each command. If no macro has been programmed, or if macros are not available in that DEVICE mode, nothing will happen and no DEVICE buttons will blink.

Special Buttons 4

There are two special function buttons at the bottom of the RR-939 remote.

The LIGHT button turns on backlighting so you can see the buttons in a dark room. The lights stay on for 7 seconds and will stay on for an additional 7 seconds each time another button is pressed.

The SHIFT button activates additional commands for some buttons. These functions are shown in italics on the illustrations and in the command tables at the back of this manual. To activate one of these commands, press and release the SHIFT button and then press the desired COMMAND button.



Programming

The RR-939 can replace up to ten different remote controls, one for each of the eight DEVICE buttons. Before you use it, you must program the RR-939, i.e. tell it which audio/video components you wish it to control.

The RR-939 contains hundreds of command sets for various A/V components. Programming the remote involves selecting the command sets that correspond to the components in your system, and assigning them to the eight DEVICE buttons by entering a three digit code. This need only be done once during initial set-up of the RR-939.

The easiest way to proceed is to find your components and corresponding three-digit codes from the list of codes at the end of this manual. If your component is not listed, there is an alternative auto-search method for finding the right command set.

Three Digit Code Programming

Find your audio/video component in the list at the end of this manual and note the 3-digit code(s):

Step One: Turn on the component you wish to memorize.

Step Two: Press the corresponding DEVICE button (for example, if you are memorizing the command set for a CD player, press the CD DEVICE button at the top of the RR-939). While pressing the DEVICE button, simultaneously press the MUTE button and hold both for at least one second. The DEVICE key will light in red for 20 seconds, indicating that you have entered the program mode. The next step must be done within this 20 second period, or the RR-939 will revert to its standard operating mode.

Step Three: Point the RR-939 at the audio/video component and enter the 3-digit code, using the numeric buttons. The DEVICE key will flash each time you enter a digit. If you have entered the correct code, the component will turn off. If there is more than one 3-digit code for your brand of source component, continue entering additional 3-digit codes from the list until the component turns off, indicating that you have found the right one.

Step Four: Store the code number by pressing the corresponding DEVICE button again. The button will blink twice to confirm the storage of the code in memory.

Step Five: Test the COMMAND buttons, using the tables at the back of this manual as a reference for the available functions. If the functions do not work correctly, repeat the above steps, with the next available 3-digit code from the list for your brand of component.

Repeat the steps above for each of up to eight components, assigning each one to the appropriate DEVICE key.

Auto-Search Programming

If the code table does not provide a 3-digit code or if none of the code numbers assigned to your brand of component work, use the following auto-search method to find a code number that will operate your components.

Step One: Turn on the component you wish to operate.

Step Two: Press the corresponding DEVICE button and the MUTE button, simultaneously for one second or more. The LED will light for 20 seconds.

Step Three: Press and hold the CH UP or CH DOWN button. This sends a succession of Power ON/OFF code signals that are stored in memory. Stop pressing the CH button as soon as the component turns off, signifying that you have found a code set that operates that component.

Step Four: Press the DEVICE button to store the code set you have found. The button will blink twice to confirm that you have stored the code.

Step Five: Test the remote control functions. If any do not work properly, repeat the preceding steps until you find the right code.

Displaying a Code Number

To find out which 3-digit code is currently stored on a DEVICE button:

Step One: Press the DEVICE button and the MUTE button simultaneously for one second or more. The DEVICE button will light red for 20 seconds.

Step Two: Press the RECALL button. The DEVICE button will blink a number of times, indicating the first digit in the code, followed by a one second interval with the light off, followed by a number of blinks indicating the second digit, followed by another interval, followed by blinks indicating the third digit. For example, one blink, three blinks, and eight blinks, with one second intervals in between, represents the 3-digit code number 138.

Note: *The number ZERO in a 3-digit code is represented by 10 blinks.*

••••• Macro Programming

There are five MACRO buttons – the four labeled M1, M2, M3, and M4 plus the POWER button. When the RR-939 is in the AUDIO, SAT, or CABLE mode, the macro buttons can store and replay a sequence of up to 8 commands.

To memorize a macro sequence:

Step One: Press a DEVICE button (AUD, SAT, or CBL only) and the MUTE button simultaneously for at least one second. The DEVICE button will light red for 20 seconds.

Step Two: Press the MACRO button you wish to program.

Step Three: Press a sequence of commands (up to 8) that you wish to store. Pressing a DEVICE button to change modes during the sequence counts as one command.

Step Four: Press the CH UP button to store the macro sequence. The DEVICE button will blink twice to confirm.

Note: *Because the POWER button can be used as a MACRO button, the normal Power On/Off commands are temporarily stored on the MUTE button during the macro learning sequence. To include a power on/off command in a macro, simply press the MUTE button.*

To erase a previously stored macro sequence, follow the above steps, skipping Step 3 without entering any commands, i.e. memorize a blank macro.

••••• Volume Punch Through

It may be desirable to have the AUDIO or TV volume commands available at all times. For example, when using the RR-939 to control your CD player, you might want the VOLUME buttons (which would normally be inactive in CD mode) to change the volume of your preamp or surround sound processor. This feature, called Volume Punch Through, can be used to make the volume commands from either the AUDIO or TV device mode available in other device modes.

TV Codes

A Mark	112	Memorex	004 007 072
Admiral	072 081 161	Metz	088
Akai	001 146	MGA	001 004 024 042
Ampro	073 167	Minerva	088
Anam	043 054 055 056 080 104 108 112	Mitsubishi	004 024 040 042 109 146
	118 121	MTC	001 004 062 101
AOC	001 004 058 112	NAD	015 025
Candle	001 002 003 004	NEC	001 019 024 040 056 130 134
Capehart	058	Nikei	043
Cetronic	043	Onking	043
Citizen	001 002 003 004 101 143	Onwa	043
	043	Optonica	019 081
Classic	043	Panasonic	034 056 080 164 001 003 004 024 056 059 060 063 064 127 143 164
Concerto	004	Philco	001 003 004 005 038 059 093 164 180 181 182 183 184 185 186 187 188 189 190 192
Contec	043 051	Pioneer	004 018 023 025 135 176
Coronado	143	Portland	004 143
Craig	054	Proscan	144 160 161 167
Crown	143	Proton	004 058 143 171 173
Curtis Mathes	001 004 101 143	Quasar	034 056
CXC	043	Radio Shack	004 019 047 127 143
Daewoo	004 055 103 111 114 127 143	RCA	001 004 023 024 056 065 074 144 152 156 160 161 007 019 047
Daytron	004 143	Realistic	007 019 047
Dynasty	043	Runco	072 169
Dynatech	062	Sampo	001 004 058
Electrohomet	024 143	Samsung	004 101 127 133 143 160
Emerson	001 004 005 028 043 047 048 051 096 143 151 153 154 155	Sanyo	007 020 021 033 053 057 082
Fisher	007 057	Scott	004 028 043 048 143
Funai	028 043	Sears	004 007 015 028 030 057 082 094 143 160
Futuretech	043	Sharp	004 014 019 022 028 143 175
GE	004 008 009 034 056 073 074 091 130 144 155 160 161	Signature	072
	004 106 110 112 113 119 127 143	Sony	070 085 126 139
Goldstar	203 204 205 207 209	Soundesign	003 004 028 043
Grundig	004	Spectricon	112
Hallmark	004 007 010 011 012 023 075 143 158 163	SSS	004 043
Hitachi	164	Supre Macy	002
Infinity	129	Sylvania	001 003 059 060 063 064 127 160 164
Inkel	164	Symphonics	052
JBL	001	Tandy	081
JCP	004 008 024 030 065 101 143 160	Tatung	056 062
JCPenny	013	Technics	034 080
Jensen	034 038 070 083	Techwood	004
JVC	001 070	Teknika	002 003 004 024 028 043 072 101 143
Kenwood	002 059	Telerent	072
Kloss	043 143 154	Tera	172
KTV	072	Thomson	194 195 196 197 198 199 200 201
Lodgenet	072		
Logik	072		
Luxman	004		
LXI	007 015 052 081 160 164		
Magnavox	001 003 004 022 059 060 061 063 064 127 164		
Marantz	001 164		
Matsui	164		

TMK	004	MGA	045 046 059
Toshiba	015 030 040 062 101	Minolta	004 020
Totevision	143	Mitsubishi	004 020 046 051 059 061 142
Universal	008 009	MTC	034 040
Video Concepts	146	Multitech	024 034
Vidikron	174	NEC	012 023 043 048
Vidtech	004	Nordmende	043
Wards	004 008 009 019 028 060 061 063 064 072 074 164	Optonica	053 054
		Panasonic	070 133 140
Yamaha	004	Pentax	004 020 031 063
York	004	Philco	031 034 067
Yupiteru	043	Philips	031 034 054 067 101 162 166 167 168 169 170 171
Zenith	072 073 095 103 112	Pilot	101
Zonda		Pioneer	004 021 048

VCR Codes

Aiwa	034	RCA	004 020 034 040 041 107 109 140 144 147
Akai	043 046 124 142 146	Realistic	001 008 010 014 031 034 040 053 054 101
Ampro	072	Ricoh	058
Anam	031 103	Runco	072
Audio Dynamics	012 023 043	Salora	014
Broksonic	035 037 129	Samsung	017 040 107 109 113 115 124
Canon	028 031	Sansui	043 048 135
Capehart	108	Sanyo	001 007 010 014 040 134
Craig	001 040 135	Scott	017 037 129 131
Curtis Mathes	031 041	Sears	001 004 008 009 010 014 017 020 081 101
Daewoo	007 010 017 065 108 111	Sharp	031 054
Daytron	108	Shintom	024
DBX	012 023 043	Sony	001 009 031 052 056 057 058
Dynatech	034 053	Soundesign	034
Electrohomet	059	STS	004
Emerson	006 017 025 027 029 031 034 035 036 037 046 101 129 131 138 153	Sylvania	031 034 059 067
		Symphonic	034
Fisher	001 008 009 010	Tandy	010 034
Funai	034	Tatung	043
GE	031 063 072 107 109 144 147	Teac	034 043
Go Video	132 136	Technics	031 070
Goldstar	004 012 020 101	Teknika	031 034 101
Harman Kardon	012 045	Thomas	034
Hitachi	018 026 034 043 063 137 150	Thomson	177 178
Instant Replay	031	TMK	006
JCL	031	Toshiba	004 008 017 059 082 131
JCPenny	004 012 040 101	Totevision	040 101
Jensen	043	Utitech	040
JVC	012 031 043 048 055 060 130 150 152	Vector Research	012
Kenwood	014 034 048	Victor	048
Lloyd	034	Video Concepts	012 034 046 141
LXI	001 004 009 017 034	Videosonic	040
Magin	040	Wards	001 004 017 024 031 034 040 053 054 131
Magnavox	031 034 041 067 068	Yamaha	012 034 043
Marantz	012 031 067 069	Zenith	034 048 056 058 072 080 101
Marta	101		
Matsui	027 030		
MEI	031		
Memorex	001 010 014 031 034 040 053 072 101 134 139		

Other Control Commands

Remote Control Button	TV	VCR	CABLE
POWER	Power	Power	Power
VOL+	Volume +		Volume +
VOL-	Volume -		Volume -
MUTE	Mute		Mute
PLAY	Select	Play	Select
STOP	Down	Stop	Down
SEARCH -	Left	Rewind	Left
SEARCH +	Right	Fast Forward	Right
PAUSE	Up	Pause	Up
RECALL	Clear/Std.	Record	Exit
GUIDE	Display/Rec.		Guide
MENU	Menu		Menu
PRE CH	Prev. Channel		Prev. Channel
T/V	TV/VCR	TV/VCR	Switch
CH +	Channel +	Channel +	Channel +
CH -	Channel -	Channel -	Channel -
0	0		0
1	1		1
2	2		2
3	3		3
4	4		4
5	5		5
6	6		6
7	7		7
8	8		8
9	9		9
10			Pay Per View
ENTER	Enter		Enter
MOVIE FILT	Sleep Timer		Fav. Station
5.1 CH			Info
SELECT			Bypass
BACK			Music
TUNER			Page +
CD			Day +
TAPE 1			Day -
TAPE 2			Page -
PHONO/LD			
VIDEO 1			
VIDEO 2			
VIDEO 3			
AUX 1			
AUX 2			
<i>[SHIFT]</i>			
M1			
M2			
M3			
M4			

Note: [SHIFT] button functions shown in italics

Remote Control Button	DVD	SAT
POWER	Power	Power
VOL+	Volume +	Volume +
VOL-	Volume -	Volume -
MUTE	Mute	Mute
PLAY	Play	Select
STOP	Stop	Down
SEARCH -	Search -	Left
SEARCH +	Search +	Right
PAUSE	Pause	Up
RECALL	Open/Close	Exit
GUIDE	Guide	Guide
MENU	Menu	Menu
PRE CH	Return	Prev. Channel
T/V		Switch
CH +	Skip +	Channel +
CH -	Skip -	Channel -
0		0
1		1
2	Up	2
3		3
4	Left	4
5		5
6	Right	6
7		7
8	Down	8
9		9
10		
ENTER	Enter	Enter
MOVIE FILT	Sub. On/Off	Fav. Station
5.1 CH	Display	Info
SELECT	Clear	Next
BACK		Alt
TUNER		
CD		
TAPE 1		
TAPE 2		
PHONO/LD		
VIDEO 1		
VIDEO 2		
VIDEO 3		
AUX 1		
AUX 2		
<i>[SHIFT]</i>		
M1		
M2		
M3		
M4		

RR-939

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